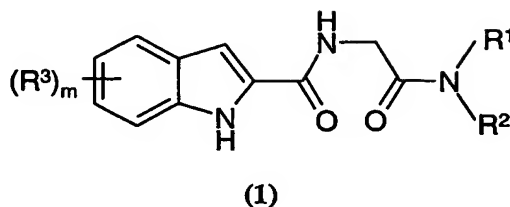


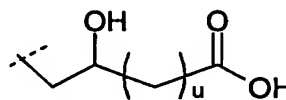
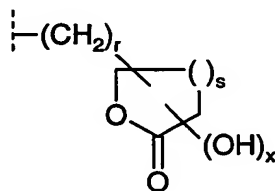
Claims

1. A compound of formula (1):



wherein:

- R^1 is independently selected from C_{1-6} alkyl, C_{5-7} cycloalkyl, C_{5-7} cycloalkyl C_{1-3} alkyl, C_{1-6} alkoxy, C_{5-7} cycloalkoxy, C_{5-7} cycloalkyl C_{1-3} alkoxy, heterocyclyl, heterocyclyl C_{1-3} alkyl, heterocycliloxy or heterocyclyl C_{1-3} alkoxy (wherein each of these groups is substituted on carbon by 1, 2 or 3 hydroxy groups, provided that there is no more than one hydroxy group on the same carbon atom and a ring carbon atom adjacent to a ring heteroatom is not substituted by a hydroxy group) and groups of the formula A or A':
- 10

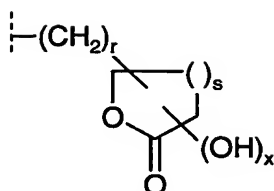


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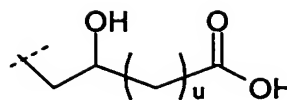
wherein x is 0 or 1, r is 0, 1, 2 or 3, s is 1 or 2 and u is 1 or 2; provided that in (A) the hydroxy group is not a substituent on the ring carbon adjacent to the ring oxygen;

- R^2 is phenyl or heteroaryl (each of which is optionally substituted by 1 or 2 substituents independently selected from halo, cyano, trifluoromethyl, difluoromethyl, fluoromethyl, C_{1-3} alkoxy, C_{1-3} alkanoyl, carbamoyl, N - C_{1-3} alkylcarbamoyl, N,N -di- C_{1-3} alkylcarbamoyl, sulfamoyl, N - C_{1-3} alkylsulfamoyl, N,N -di- C_{1-3} alkylsulfamoyl and groups of the formulae B and B':
- 20

-30-



(B)



(B')

wherein x is 0 or 1, r is 0, 1, 2 or 3, s is 1 or 2 and u is 1 or 2; provided that the hydroxy group is not a substituent on the ring carbon adjacent to the ring oxygen);

5 m is 0, 1 or 2;

R³ is independently selected from hydrogen, halo, nitro, cyano, hydroxy, carboxy, carbamoyl, C₁₋₄alkyl, C₂₋₄alkenyl, C₂₋₄alkynyl, C₁₋₄alkoxy, C₁₋₄alkanoyl, fluoromethyl, difluoromethyl, trifluoromethyl and trifluoromethoxy;

provided that when R¹ is of the formula A or A' then R² does not contain a group of the

10 formula B or B' and when R² is of the formula B or B' then R¹ does not contain a group of the formula A or A';

or a pharmaceutically acceptable salt or prodrug thereof.

2. A compound of the formula (1) as claimed in claim 1, wherein:

15 R¹ is selected from C₁₋₆alkyl, C₅₋₇cycloalkyl, C₅₋₇cycloalkylmethyl, C₁₋₆alkoxy, C₅₋₇cycloalkoxy, C₅₋₇cycloalkylC₁₋₃methoxy, heterocyclyl, heterocyclylmethyl, heterocyclyloxy and heterocyclylmethoxy (wherein each of these groups is substituted by 1 or 2 hydroxy groups provided that there is no more than one hydroxy group on the same carbon atom) or R¹ is of the formula A or A';

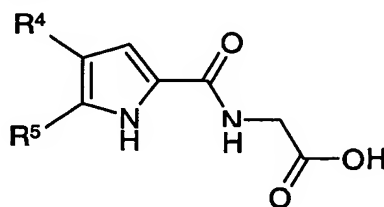
20 R² is a phenyl or heteroaryl group (each of which is optionally substituted by 1 or 2 substituents independently selected from halo, cyano, trifluoromethyl, carbamoyl, N-C₁₋₃alkylcarbamoyl, N,N-di-C₁₋₃alkylcarbamoyl, sulfamoyl, N-C₁₋₃alkylsulfamoyl, N,N-di-C₁₋₃alkylsulfamoyl, a group of the formula B and a group of the formula B'); or a pharmaceutically-acceptable salt or in-vivo hydrolysable ester thereof.

3. A compound of the formula (1) as claimed in claim 1, wherein:
R¹ is selected from C₁₋₆alkyl, C₅₋₇cycloalkyl, C₅₋₇cycloalkylmethyl, C₁₋₆alkoxy, C₅₋₇cycloalkoxy and C₅₋₇cycloalkylC₁₋₃methoxy, (each group is substituted by 1 or 2 hydroxy groups provided that there is no more than one hydroxy group on the same carbon atom);
- 5 R² is a phenyl or heteroaryl group (each of which is optionally substituted by 1 or 2 substituents independently selected from halo, cyano, trifluoromethyl, carbamoyl, N-C₁₋₃alkylcarbamoyl, N,N-di-C₁₋₃alkylcarbamoyl, sulfamoyl, N-C₁₋₃alkylsulfamoyl and N,N-di-C₁₋₃alkylsulfamoyl);
or a pharmaceutically-acceptable salt or in-vivo hydrolysable ester thereof.
- 10
4. A compound of the formula (1) as claimed in claim 1, wherein:
R¹ is selected from ethyl, propyl, cyclopentyl, cyclohexyl, cyclopentylmethyl and cyclohexylmethyl (wherein each group is substituted by 1 or 2 hydroxy groups provided that there is no more than one hydroxy group on the same carbon atom);
- 15 R² is selected from phenyl, pyridyl, oxadiazolyl, oxazolyl, thiazolyl and thienyl (each of which group is optionally substituted by 1 or 2 substituents independently selected from halo, cyano, trifluoromethyl, carbamoyl, N-C₁₋₃alkylcarbamoyl, sulfamoyl and N-C₁₋₃alkylsulfamoyl);
m is 1; and
R³ is chloro;
- 20 or a pharmaceutically-acceptable salt or in-vivo hydrolysable ester thereof.
5. A compound of the formula (1) as claimed in claim 1 wherein:
R¹ is selected from 2-hydroxyethyl, 2,3-dihydroxypropyl, 3,4-dihydroxycyclopentyl and 3,4-dihydroxycyclopentylmethyl;
- 25 R² is phenyl optionally substituted by 1 or 2 substituents independently selected from halo, cyano, trifluoromethyl, carbamoyl, N-C₁₋₃alkylcarbamoyl, sulfamoyl and N-C₁₋₃alkylsulfamoyl;
m is 1 or 2; and
R³ is hydrogen or halo;
- 30 or a pharmaceutically-acceptable salt or in-vivo hydrolysable ester thereof.

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6. A process for preparing a compound of formula (1), as defined in claim 1 or a pharmaceutically-acceptable salt or an *in vivo* hydrolysable ester thereof which process comprises:

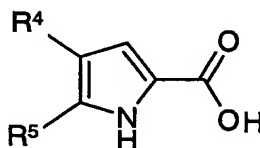
a) reacting an acid of the formula (2):



(2)

or an activated derivative thereof; with an amine of formula (3): HNR^1R^2 or

b) reacting an acid of the formula (4):



(4)

or an activated derivative thereof; with an amine of formula (5): $\text{H}_2\text{NCH}_2\text{CONR}^1\text{R}^2$:

wherein R^1 , R^2 , R^4 and R^5 are, unless otherwise specified, as defined in claim 1;

wherein any functional groups are optionally protected;

and thereafter if necessary:

- 15 i) converting a compound of the formula (1) into another compound of the formula (1);
- ii) removing any protecting groups;
- iii) forming a pharmaceutically acceptable salt or *in vivo* hydrolysable ester.

7. A pharmaceutical composition comprising a compound of the formula (1) as claimed
20 in any one of claims 1 to 5 or a pharmaceutically-acceptable salt or *in vivo* hydrolysable ester thereof and a pharmaceutically-acceptable diluent or carrier.

8. A compound of the formula (1) as claimed in any one of claims 1 to 5, or a
25 pharmaceutically acceptable salt or *in vivo* hydrolysable ester thereof, for use as a medicament.

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9. The use of a compound of the formula (1), or a pharmaceutically acceptable salt or *in vivo* hydrolysable ester thereof, as claimed in any one of claims 1 to 5, in the manufacture of a medicament for use in the treatment of type 2 diabetes, insulin resistance, syndrome X, hyperinsulinaemia, hyperglucagonaemia, cardiac ischaemia or obesity in a warm-blooded
5 animal.

10. A compound of the formula (1), or a pharmaceutically acceptable salt or *in vivo* hydrolysable ester thereof, as claimed in any one of claims 1 to 5, for use as a medicament in the treatment of type 2 diabetes, insulin resistance, syndrome X, hyperinsulinaemia,
10 hyperglucagonaemia, cardiac ischaemia or obesity in a warm-blooded animal such as man.

11. A compound of the formula (1), or a pharmaceutically acceptable salt or *in vivo* hydrolysable ester thereof, as claimed in any one of claims 1 to 5, in the manufacture of a medicament for use in the treatment of type 2 diabetes, insulin resistance, syndrome X, hyperinsulinaemia, hyperglucagonaemia, cardiac ischaemia or obesity in a warm-blooded
15 animal such as man.

12. A method of treating type 2 diabetes, insulin resistance, syndrome X, hyperinsulinaemia, hyperglucagonaemia, cardiac ischaemia or obesity in a warm-blooded animal, such as man, in need of such treatment which comprises administering to said animal
20 an effective amount of a compound of formula (1) as claimed in any one of claims 1 to 5.

13. A method of treating type 2 diabetes in a warm-blooded animal, such as man, in need of such treatment which comprises administering to said animal an effective amount of a compound of formula (1) as claimed in any one of claims 1 to 5.
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